

REQUEST FOR BOARD ACTION

HENDERSON COUNTY BOARD OF COMMISSIONERS

MEETING DATE: September 19, 2012

SUBJECT: Emergency Communications System

PRESENTER: Rocky Hyder

ATTACHMENTS: Yes:
1. Communications Project Presentation

SUMMARY OF REQUEST:

In February 2012 Henderson County was awarded a federal grant to replace our aging emergency communications system. Staff issued a Request for Proposals (RFP) and a public bid opening was held with three responsive bidders providing bids ranging from \$1,691,081.14 to \$2,106,088.32. Since all bids were above budget, staff has been working with the lowest responsive bidder on value engineering options.

Staff will provide a presentation of the current issues and options for discussion and direction from the Board.

BOARD ACTION REQUESTED:

Provide staff direction for moving forward with the emergency communications project.

Suggested Motion:

No suggested motion.

Henderson County Emergency Communications Project



Henderson County Radio System

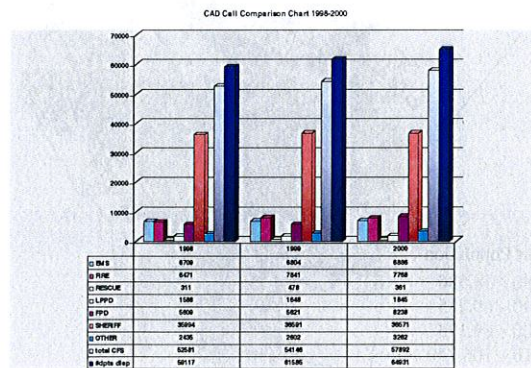
- Serves as primary means for coordination of all public safety response within Henderson County
- Current system design based upon 1980 Fire Service needs.
- Since 1980 there has been one system level improvement (2004 adding additional sites for Law Enforcement and EMS).
- Operates on VHF band, most suitable band for mountainous and geographically diverse such as Henderson County
- Each Public Safety Discipline (Fire, EMS, Law) has (1) primary dispatch channel critical for all communication and coordination of Emergency response
- System is supplemented with other communications devices mostly designed to exchange data.

System Issues

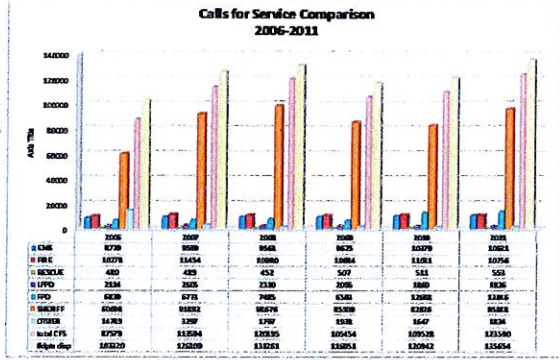
Current system issues:

- Main components have been discontinued and supported on limited parts availability
- Current end users of all 3 services are above capacity for channel availability.
- Due to FCC rule changes, coverage area is less now than it was in 2001 (narrow-banding and power restrictions).
- Limited or no security
- Unable to establish system status alarms and safeguards to monitor and reduce loss of service.

Call Volume 1998 - 2000

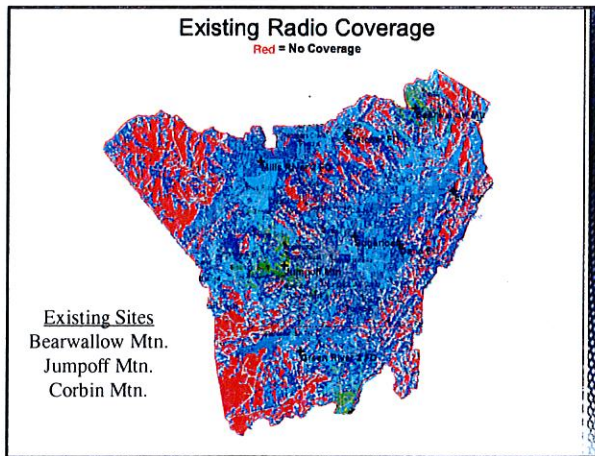
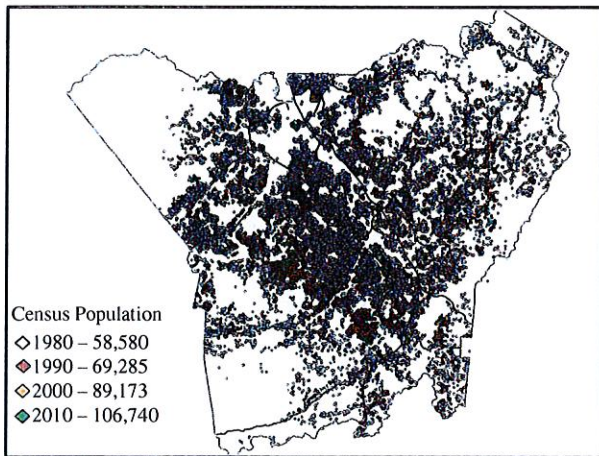


Call Volume 2006 - 2011



Emergency Services Summary 1998-2011

- Call Volume breakdown from 1998-2011
 - EMS/Rescue call volume increase 163%
 - Fire call volume increase around 166%
 - County Wide Law Enforcement call volume increase around 258%
- County Population breakdown from 1980-2011
 - Increase of over 182%
 - Migration of population density into new areas of the county



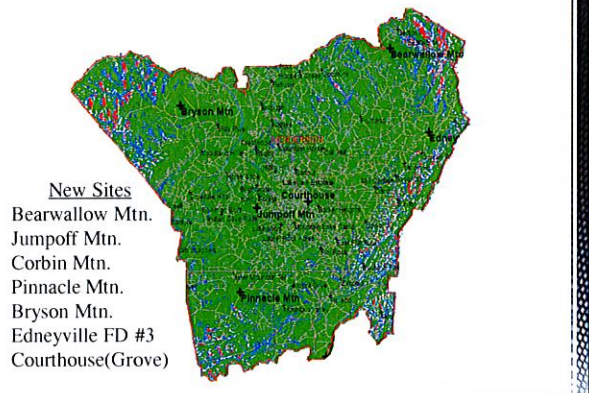
Reasons for Updating the System

- Change of communications tools
 - Current system was designed for mobile to mobile coverage under different FCC rules
 - Emergency personnel use handheld radios to maintain situational awareness and constant communications with the 9-1-1 Center
 - Most emergencies or calls for service occur inside of a residence making indoor communications critical
- Change in Infrastructure Requirements
 - FCC rule changes designed to maximize frequency availability, effectively minimize coverage area which ultimately requires additional sites and towers to achieve acceptable coverage.
- Building Construction changes
 - Multi-story dwellings
 - Steel and concrete structures significantly reduce in-building signal penetration.

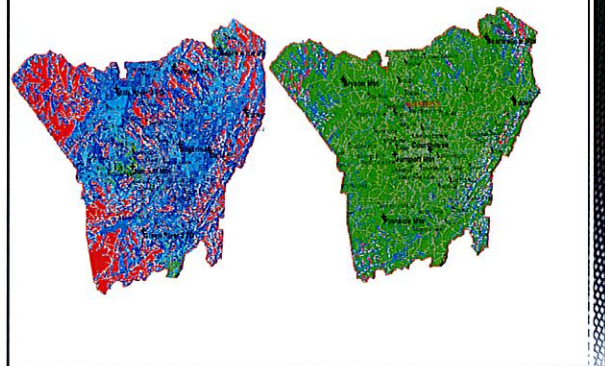
New System Considerations

- Capacity - Increased to accommodate current number of subscribers with multiple channels and support future growth.
- Capability – The system should be able to support voice and data transmission with the ability for expansion into automated vehicle location and video transmission.
- Coverage – A minimum of 7 sites to provide for our current coverage needs and capable of supporting additional sites for future growth or equipment changes.
- Security – The new system should utilize 6.25Khz bandwidth technology (future FCC rule change) and include different levels of encryption which eliminates eavesdropping and meets Federal requirements for classified documents.
- Modular - Design should allow current subscriber equipment to be utilized on the new system and provide for a budget friendly phase in period of advanced features.
- Monitoring - System performance will be capable of remote monitoring and notify key personnel of any failures or potential issues immediately to avoid loss of service.

Projected Coverage Area With 7 sites



Coverage Comparison



Cost\$

Federal Grant to update system - \$946,780.00 - 80/20 (\$757,424.00 Federal / \$189,356.00 County) Budgeted in FY 12-13.

Original lowest responsive bid - \$1,691,081.00

Value Engineered bid - \$

Cost difference - \$

Questions and Discussion

